

## Patent Abstracts of Japan

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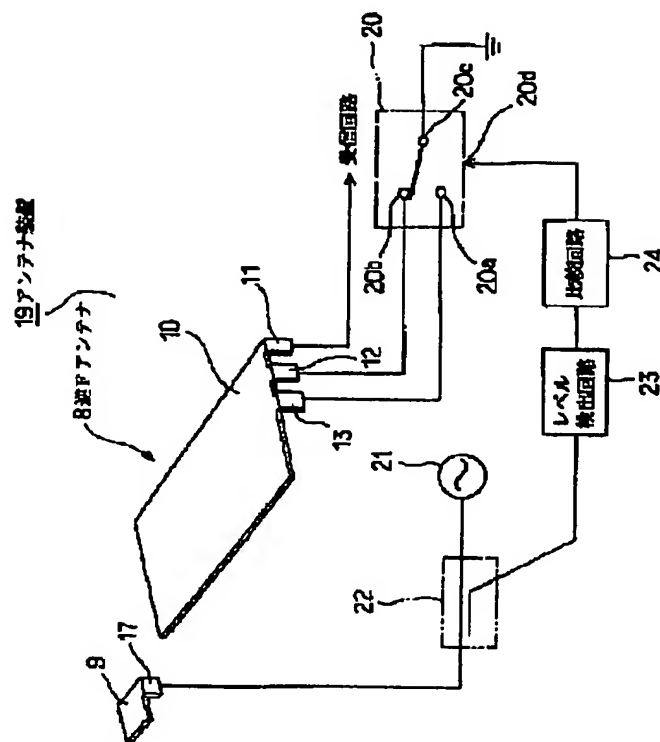
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TITLE : ANTENNA SYSTEM AND PORTABLE TELEPHONE SET



ABSTRACT : PROBLEM TO BE SOLVED: To ensure a high gain at a reception frequency band even when a surrounding object approaches an inverted-F antenna.

SOLUTION: Two stubs 12, 13 are provided to an inverted-F antenna 8. A detection conductor plate 9 is provided nearly in parallel with a radiation conductor plate 10 of the inverted-F antenna 8, and an oscillation circuit 21 outputs a detection current with a frequency different from those in a reception frequency band to the detection conductor plate 9. In this case, the detection conductor plate 9 is brought into a resonance state in a free space. A detection circuit 23 detects a reflection level from the detection conductor 9 through envelope detection and a comparator circuit 24 compares this detection signal with a threshold voltage to provide a switching signal. A switch 20 selects the stub 12 when the voltage of the detection signal is lower than the threshold voltage and selects the stub 13 when the voltage of the detection signal is higher than the threshold voltage on the basis of this switching signal.

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